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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/801,637  | 03/09/2001  | Dae Sik Kim          | P-202               | 3932             |
| 34610   | 7590        | 09/30/2004           | EXAMINER            |                  |
| FLESHNER & KIM, LLP<br>P.O. BOX 221200<br>CHANTILLY, VA 20153 |             |                      | MACE, BRAD THOMAS   |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2663                |                  |
| DATE MAILED: 09/30/2004                                       |             |                      |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 09/801,637             | KIM, DAE SIK        |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Brad T. Mace           | 2663                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Specification***

1. The abstract of the disclosure is objected to because "coding" should be "decoding" on line 10 of the abstract. Correction is required. See MPEP § 608.01(b).
2. The disclosure is objected to because of the following informalities: "raw" should be "row" on line 19 of pg. 4. "operaiton" should be "operation" on line 4 of pg. 4. "interlever" should be "interleaver" on line 7 of pg. 5. No reference is made to Figure 5 in the "Background of the Invention" section. "coding" should be "decoding" on line 7 of pg. 6 and on line 14 of pg. 8. "modulolator" should be "modulator" on line 2 of pg. 9. "rateare" should be "rate are" on line 22 of pg. 9. "n" should be "in" on line 23 of pg. 9. "eh" should be "the" on line 24 of pg. 9. No reference is made to Figure 7 in the "Detailed Description of the Preferred Embodiments" section. "bit" should be added appropriately throughout the specification (and abstract) to delineate 6 bit, 18 bit, and 64 bit code symbols (or Walsh codes) respectively. Appropriate correction is required.

### ***Claim Objections***

3. Claims 1, 6, 10, 11, and 13 are objected to because of the following informalities: "6 code symbols" should read "6 bit code symbols" on line 5 and line 6 of claim 1. "generates" should be "generating" on line 7 of claim 1. "64 Walsh codes" should read as "64 bit Walsh codes" on line 11 of claim 1? "receiving code symbols by 6 ones from the shift register unit" should be modified for clarity on lines 2-3 of claim 6 since it is not understood what is meant by "6 ones". "6 code symbols" should read "6 bit code symbols" on line 8 of claim 10. "addresses" should be "address" on line 2 of claim 11.

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"6 code symbols" should read "6 bit code symbols" on line 2 of claim 13. In claim 10, should, outputting the Walsh index from the index decoding unit to an orthogonal modulator for outputting 64 bit Walsh codes on the basis of the Walsh index, be mentioned in the method? Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. In claim 10 on line 6, it is unclear as to what is meant by "first code symbols" and its connection to the "1-row code symbols" and the "6 bit code symbols". A logical connection clearly delineating in how the "1-row code symbols" and "6 bit code symbols" are related is needed.

7. Claim 1 recites the limitation "index coding unit" in line 10 of claim 1 (coding should be decoding). There is insufficient antecedent basis for this limitation in the claim.

8. Claim 2 recites the limitation "the 1-row code symbols" in line 2 of claim 2. There is insufficient antecedent basis for this limitation in the claim.

9. Claim 10 recites the limitation "the interleaver memory" in line 3 of claim 10. There is insufficient antecedent basis for this limitation in the claim.

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10. Claim 10 recites the limitation "the shift register unit" in line 5 of claim 10. There is insufficient antecedent basis for this limitation in the claim.

11. Claim 10 recites the limitation "the first code symbols" in line 6 of claim 10. There is insufficient antecedent basis for this limitation in the claim.

12. Claim 10 recites the limitation "the 6 code symbols" in line 8 of claim 10. There is insufficient antecedent basis for this limitation in the claim.

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

\*Dalekotzin discloses an interleaver that outputs coded bits to a shift register in which the shift register splits the bits to a multiplexer, where the state of the bits determines the particular Walsh code (through the use of the multiplexer).

\*Honkasalo et al. discloses a method and arrangement for high-speed data transmission in a mobile telecommunications system.

\*Rakib et al. discloses a two dimensional interleave process for CDMA transmissions of one dimensional time slot data.

\*Chen et al. discloses an interleaving method and apparatus for orthogonal transmit diversity and multi-carriers CDMA communication systems.

\*Sun et al. discloses a method and apparatus for encoding data for transmission in a communication system.

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14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brad T. Mace whose telephone number is (571) 272-3128. The examiner can normally be reached on Monday -Thursday.

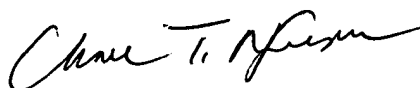
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

btm

Brad T. Mace  
Examiner  
Art Unit 2663

btm  
September 21, 2004



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SUPERVISORY PATENT EXAMINER  
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